

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method for securely communicating to a mobile node on a communications system having a home network for the mobile node and at least one foreign network comprising the steps of:

establishing at least one security association between the home network and the foreign network, wherein the home network has at least one home agent network server;

establishing at least one security association between the mobile node and the foreign network using a registration message to transmit a public key;

encrypting information in an information packet to be transmitted from the mobile node to the home network;

transmitting the information packet from the mobile node using the security associations to support secure communications from the mobile node;

routing the information packet through an AAA server performing authentication and accounting functions; and

decoding information from the encrypted information packet at the home network to retrieve the information.

2. (Original) The method of securely communicating to a mobile node in Claim 1 further comprising the step of:

establishing a security association between the home network and a correspondent node.

3. (Original) The method of securely communicating to a mobile node in Claim 1 further comprising the step of:

establishing a security association between the mobile node and a correspondent node.

4. (Original) The method of securely communicating to a mobile node in Claim 3 further comprising the step of:

establishing a security association between the home network and a correspondent node.

5. (Original) The method of securely communicating to a mobile node in Claim 1 further comprising the step of:

encrypting information using a public key algorithm.

6. (Original) The method of securely communicating to a mobile node in Claim 1 further comprising the step of:

encrypting information using a private key algorithm.

7. (Original) The method of securely communicating to a mobile node in Claim 1 further comprising the step of:

supporting the secure communication for the security association between the foreign network and the mobile node using a code-based cellular communication system.

8. (Original) The method of securely communicating to a mobile node in Claim 1 further comprising the step of:

establishing multiple security associations between a plurality of foreign networks and the home network.

9. (Original) The method of securely communicating to a mobile node in Claim 8 further comprising the step of:

establishing a service level agreement to manage the secure communication of information packets on the multiple security associations.

10. (Original) The method of securely communicating to a mobile node in Claim 9 further comprising the step of:

establishing a broker to assist in the use of service level agreements on the secure communications system.

11. (Currently Amended) A method for securely communicating to a mobile node on a communications system having a home network for the mobile node and at least one foreign network comprising the steps of:

establishing at least one security association between the home network and the mobile node, wherein the home network has at least one home agent network server;

transmitting a registration message containing a public key;

encrypting information in an information packet to be transmitted from the mobile node to the home network;

transmitting the information packet from the mobile node using the security associations to support secure communications from the mobile node;

routing the information packet through an AAA server performing authentication and accounting functions; and

decoding information from the encrypted information packet at the home network to retrieve the information.

12. (Original) The method of securely communicating to a mobile node in Claim 11 further comprising the step of:

establishing a security association between the home network and a correspondent node.

13. (Previously Amended) The method of securely communicating to a mobile node in Claim 11 further comprising the step of:

establishing a security association between the mobile node and a correspondent node.

14. (Original) The method of securely communicating to a mobile node in Claim 13 further comprising the step of:

establishing a security association between the home network and a correspondent node.

15. (Original) The method of securely communicating to a mobile node in Claim 11 further comprising the step of:

encrypting information using a public key algorithm.

16. (Original) The method of securely communicating to a mobile node in Claim 11 further comprising the step of:

encrypting information using a private key algorithm.

17. (Original) The method of securely communicating to a mobile node in Claim 11 further comprising the step of:

establishing multiple security associations between a plurality of foreign networks and the home network.

18. (Original) The method of securely communicating to a mobile node in Claim 17 further comprising the step of:

establishing a service level agreement to manage the secure communication of information packets on the multiple security associations.

19. (Original) The method of securely communicating to a mobile node in Claim 18 further comprising the step of:

establishing a broker to assist in the use of service level agreements on the secure communications system.

20. (Currently Amended) A system for securely communicating to a mobile node in a wireless communications network comprising:

a home network having a home agent server coupled to a router capable of directing information packets to and from the home network;

a foreign network having a foreign agent coupled to a router capable of directing information packets to and from the foreign network and a transceiver capable of performing wireless communications with at least one mobile node in the transmission range of the transceiver for the foreign network;

a security association established between the home network and the foreign network and a security association established between the mobile node and the foreign network using registration messages to transmit a public key, both security associations used to support the secure communication of information packets from the mobile node to the home network; and

said information packets routed through an AAA server performing authentication and accounting functions to track secure communication transmissions.

21. (Original) The system of securely communicating to a mobile node in Claim 20 further comprising:

a security association between the home network and a correspondent node.

22. (Original) The system of securely communicating to a mobile node in Claim 20 further comprising:

a security association between the mobile node and a correspondent node.

23. (Original) The system of securely communicating to a mobile node in Claim 22 further comprising:

a security association between the home network and a correspondent node.

24. (Original) The system of securely communicating to a mobile node in Claim 20 further comprising:

a public key encryption means to secure communications.

25. (Original) The system of securely communicating to a mobile node in Claim 20 further comprising:

a private key encryption means to secure communications.

26. (Original) The system of securely communicating to a mobile node in Claim 20 further comprising:

multiple security associations between a plurality of foreign networks and the home network.

27. (Original) The system of securely communicating to a mobile node in Claim 26 further comprising:

a service level agreement to manage the secure communication of information packets on the multiple security associations.

28. (Original) The system of securely communicating to a mobile node in Claim 27 further comprising:

a broker to assist in the use of service level agreements on the secure communications system.

29. (Currently Amended) A system for securely communicating to a mobile node in a wireless communications network comprising:

a home network having a home agent network server coupled to a router capable of directing information packets to and from the home network;

a foreign network having a foreign agent coupled to a router capable of directing information packets to and from the foreign network and a transceiver capable of performing wireless communications with at least one mobile node in the transmission range of the transceiver for the foreign network;

a security association established between the home network and the mobile node, the security association used to support the secure communication of information packets from the mobile node to the home network; and

an AAA server performing authentication and accounting functions used to track secure communication transmissions using the security associations.

30. (Original) The system of securely communicating to a mobile node in Claim 29 further comprising:

a security association between the home network and a correspondent node.

31. (Original) The system of securely communicating to a mobile node in Claim 29 further comprising:

a security association between the mobile node and a correspondent node.

32. (Original) The system of securely communicating to a mobile node in Claim 31 further comprising:

a security association between the home network and a correspondent node.

33. (Original) The system of securely communicating to a mobile node in Claim 29 further comprising:

a public key encryption means to secure communications.

34. (Original) The system of securely communicating to a mobile node in Claim 29 further comprising:

a private key encryption means to secure communications.

35. (Original) The system of securely communicating to a mobile node in Claim 29 further comprising:

multiple security associations between a plurality of foreign networks and the home network.

36. (Original) The system of securely communicating to a mobile node in Claim 35 further comprising:

a service level agreement to manage the secure communication of information packets on the multiple security associations.

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37. (Original) The system of securely communicating to a mobile node in Claim

36 further comprising:

a broker to assist in the use of service level agreements on the secure communications system.